

Exhibit C

Lehr Demonstrative

Sony Music Entertainment, *et al.*,
v.
Cox Communication, Inc., *et al.*

William Lehr Direct Testimony

Summary of Conclusions

1. **Copyright infringement causes significant harms to copyright holders** – this includes P2P piracy of Plaintiffs' works by Cox subscribers
2. **Harm to copyright holders from piracy is impossible to quantify**
3. **Cox is highly profitable** and the infringing subscribers identified in Plaintiffs' notices **contribute significantly to Cox's profitability**
4. **Cox had a strong economic incentive to tolerate infringement** in order to retain subscribers and their substantial payments

Piracy Harms the Copyright Holders

- Infringing downloads and uploads **displace legitimate sales**
 - Piracy **negatively impacts pricing**
 - Copyright holders incur **substantial enforcement costs**
 - Piracy **deters future investments** and **reduces incentives to create**
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Impact of Infringement is Substantial

Quantifying Global Transfers of Copyrighted Content using BitTorrent

Quantifying Global Transfers of Copyrighted Content using BitTorrent

Alexandre M. Mateus
Jon M. Peha

Abstract

This paper presents the most accurate estimate of the number of copies of content of various types that is transferred using BitTorrent, a peer-to-peer file sharing application. Using data we collected from a large-scale study between August 2010 and February 2011, we find that the number of copies transferred is an order of magnitude greater than the number sold through legal channels. For example, we estimate that 10.7 songs were transferred using BitTorrent for every song sold, 3.6 movies were transferred using BitTorrent for every legal sale or rental of a DVD or Blu-ray, and 227 movies were transferred using BitTorrent for every paid download. We also find that the vast majority of music and video content transferred using BitTorrent is copyrighted, as demonstrated both by the swarm metadata we observed, and the fact that only 0.55% of the transfers were of files indexed by websites that specialize in content that can be transferred legally. Thus, we conclude that BitTorrent transfers result in hundreds of millions of copyright violations worldwide per day, and that copyright holders fail to realize significant revenues as a result. Movies are the type of content most supplied and

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³ Jon M. Peha contributed to this work in his capacity as a professor at Carnegie Mellon University, and dissertation advisor to Alexandre Mateus. Any opinion expressed herein is that of one or both of the authors, and does not represent the views of the U.S. Government.

Source: PX-521; Mateus, Peha, "Quantifying Global Transfers of Copyrighted Content using BitTorrent," Sept. 2011. TPRC 2011.

Sizing the Piracy Universe

Sizing the piracy universe

David Price
Director of Piracy Analysis
September 2013

were most popular with bittorrent downloaders. Also, with pornography excluded, **only two identified torrent files out of 12,500 torrents analyzed offered non-infringing content.** None of the most popular 10,000 torrent files were found to offer non-infringing content.

content, just 0.015%. Thus out of all non-pornographic files located, **99.97% of content was infringing.** If

NetNames^{NW} envisional 

Source: PX-439; Price, 2013. "Sizing the Piracy Universe" at p.29-30.


Impossible to Quantify Harm

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- **No data on the scope of infringement** through viral P2P piracy
 - **No data regarding the music purchasing** behavior of P2P users
 - **No data to understand impact on Plaintiffs' pricing**
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Industry Economics & Cox's Revenues and Profits

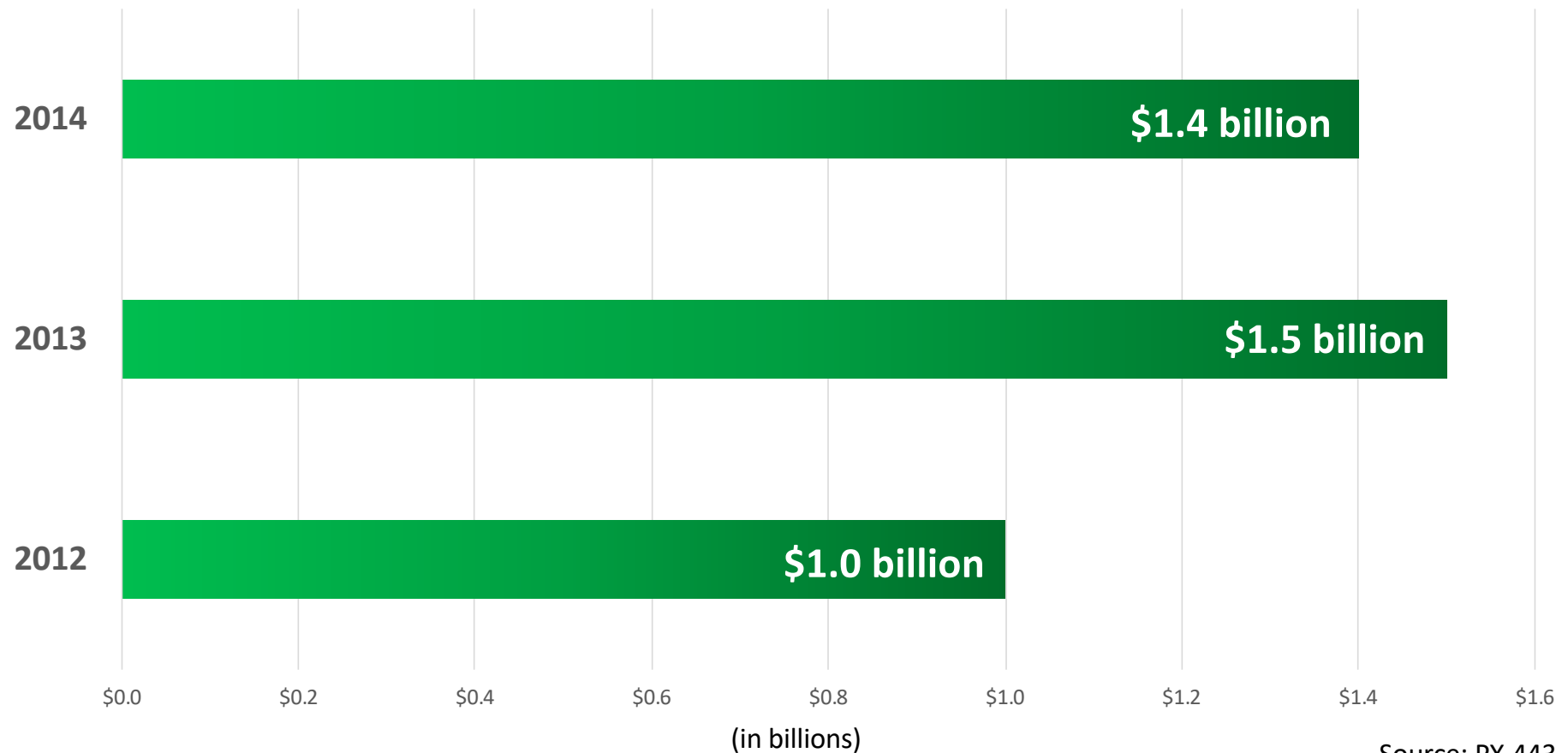
Cox Revenue and Profit from Residential and Business Customers



	2013	2014	TOTAL
Revenue	\$9.5 billion	\$10.0 billion	\$19.5 billion
Net Profit	\$4.0 billion	\$4.3 billion	\$8.3 billion







Source: PX-459, DX-250

Cox Paid Billions In Cash Dividends To Its Owners



Source: PX-443

Cox vs. Plaintiffs (2014)

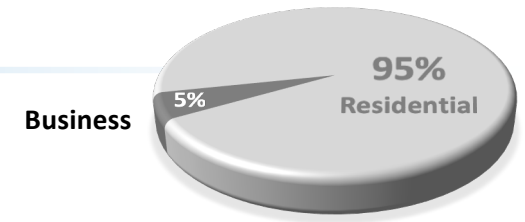
				 *	 *
Revenue	\$10.0 billion	\$1.1 billion	\$625 million	\$5.5 billion	\$3.0 billion
Net Profit	\$4.3 billion	\$65 million	\$174 million	\$514 million	\$130 million
Margin	43.0%	6.0%	27.9%	9.3%	4.3%

Average Margin: 8.6%

*Universal and Warner values represent global revenues and net profit

Source: PX-459, DX-250

Cox Residential Revenue and Profits (2014)



COX



	Revenue	Net Profit	Margin
High Speed Internet	\$2.8 billion	\$1.7 billion	59.8%
Video	\$4.2 billion	\$912 million	21.5%
Voice	\$1.1 billion	\$570 million	52.5%
Total	\$8.2 billion	\$3.2 billion	38.9%

Source: PX-459



Cox Benefited from Infringement on Its Network

Cox Benefited from Infringement on Its Network

1. Cox billed subscribers identified in Plaintiffs' infringement notices approximately **\$307 million** from Feb. 2013 – 2016
 2. Repeat infringers **paid Cox more for internet service**, on average, and likely purchased more expensive internet plans
 3. Cox **saved costs by not addressing copyright infringement** on its network
 4. Cox **maintained a larger subscriber base**
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Cox Value of Infringing Subscribers (Feb. 2013 – 2016)



		1+ DMCA Tickets	3+ DMCA Tickets	5+ DMCA Tickets
	Subscriber Count	57,279	31,514	20,189
	Billing Charges	\$307 million	\$208 million	\$164 million

Sources: PX-19, PX-467-474, PX-479

Cox's Motive at Termination Review

From: Sikes, Joseph (CCI-Atlanta)
Sent: Thursday, March 27, 2014 4:24 PM
To: HRD-TOC (CCI-Hampton Roads); CCI - Abuse Corporate
Subject: RE: Request for Termination - CATS Ticket 18640545

This Customer pays us over \$400/month and if we terminate their internet service, they will likely cancel the rest of their services.

PX-342

(06:52:06 PM) G Chaos L2: what is soft term ?

(06:52:53 PM) joesikesatl: basically, a suspension that is called a termination with the likelihood of reactivation

(06:53:14 PM) joesikesatl: for DMCA - we don't want to loose the revenue

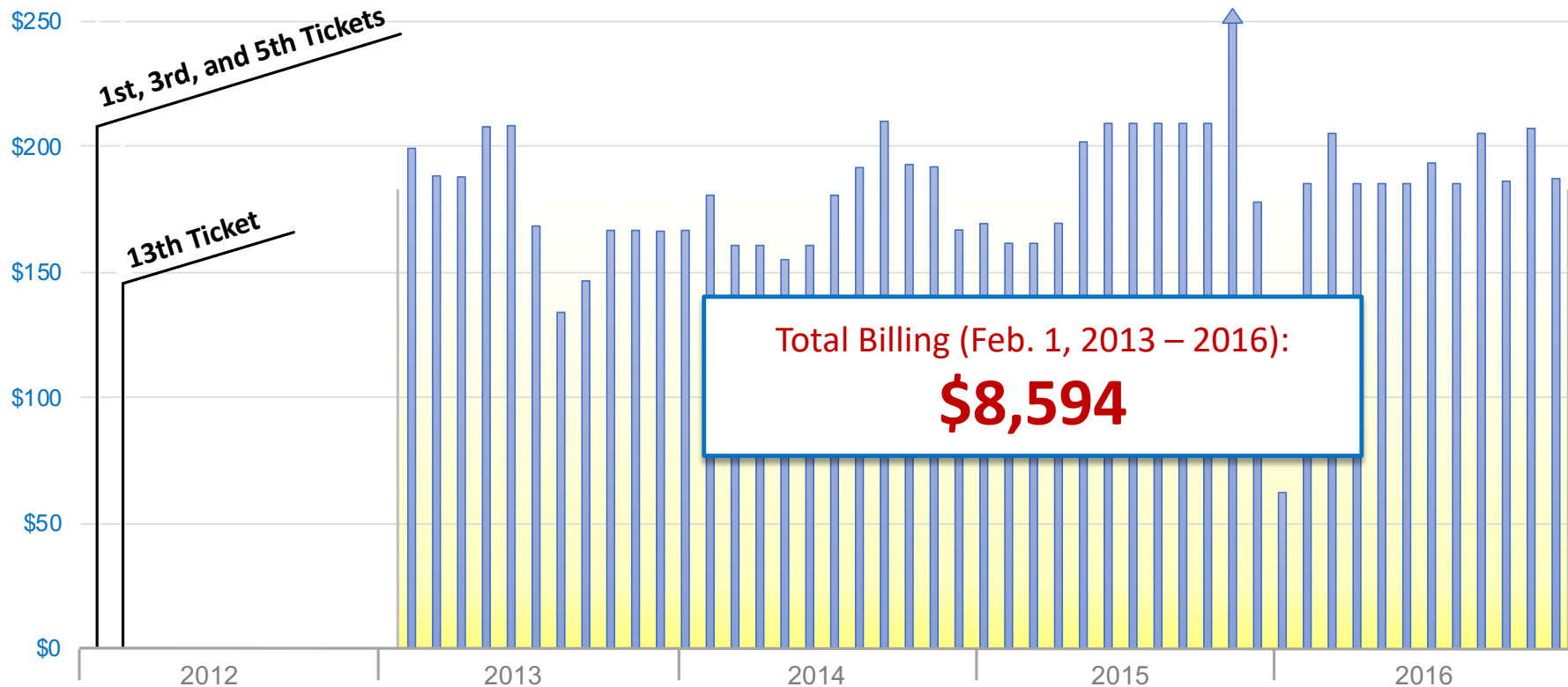
* * *

(07:00:13 PM) joesikesatl: this is a relatively new process that we've been doing for the past year, again, to retain revenue

PX-303

Examples of Individual Subscribers

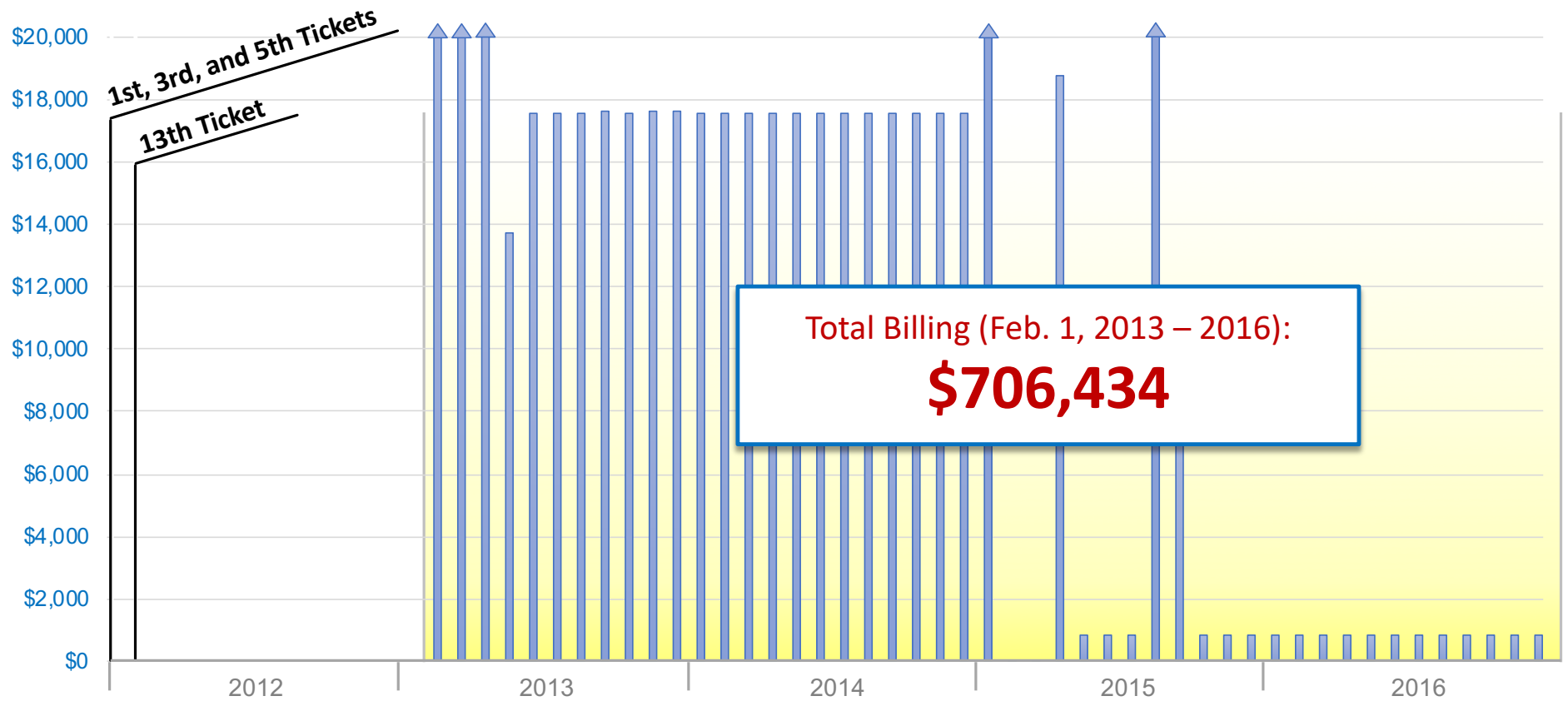
Cox Monthly Billing for Residential Subscriber with 101 Tickets



Customer ID: 580702666207

Sources: PX-19, PX-467-474, PX-479

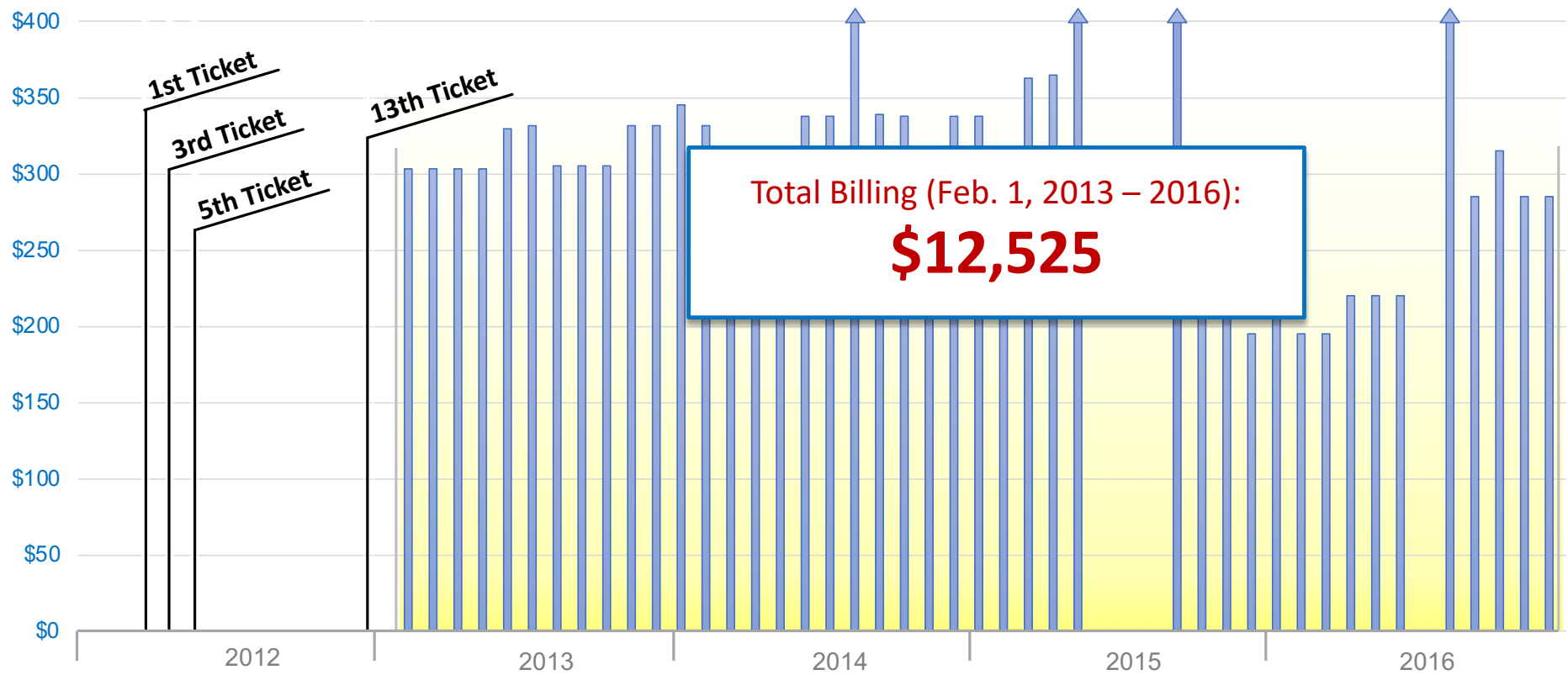
Cox Monthly Billing for Reseller of Cox Broadband with 4,074 Tickets



Customer ID: 57168701

Sources: PX-19, PX-467-474, PX-479

Cox Monthly Billing for College Fraternity with 67 Tickets



Customer ID: 70866401

Sources: PX-19, PX-467-474, PX-479

Repeat Infringers Are Particularly Valuable to Cox

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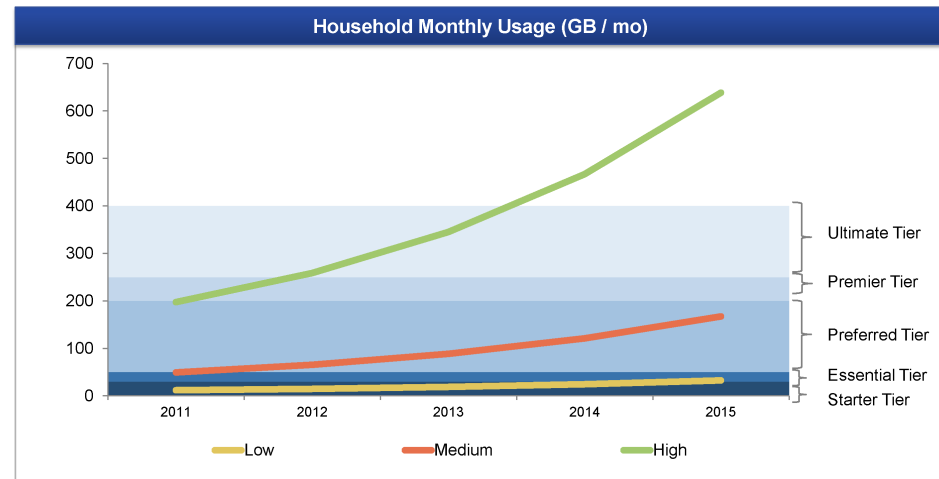
- **Cox charges higher prices** for faster internet speed and more bandwidth
 - **P2P consumes more bandwidth** than most activities and is primarily used for infringement
 - **P2P usage was a key driver of Cox's bandwidth demand**
 - **Repeat infringers paid Cox more** for internet service, on average, than other subscribers
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Cox High Speed Internet Data Usage Assessment

- P2P is the most bandwidth intensive category. P2P households (13% of all broadband households) on average use 82 GB/mo, accounting for 21% of all internet traffic.

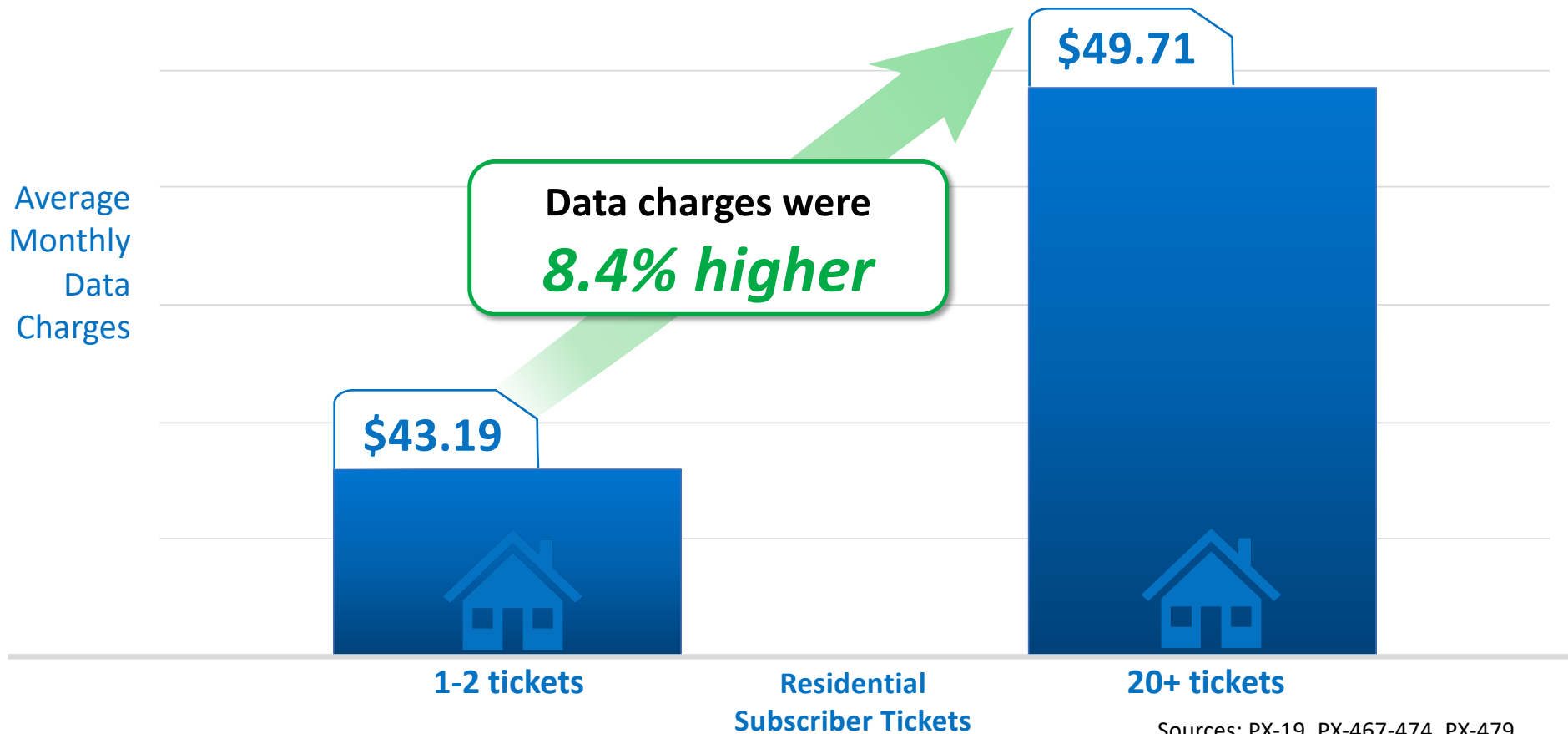
Monthly Household Usage Compared to Cox Service Tiers

Comparing the low, medium, and high household usage against Cox's current tier allowances shows that the low and medium tiers will continue to fall within their expected bandwidth; however the high bandwidth tier pushes the limits of accepted data usage due to high live TV and P2P activity.



Sources: PX-212

Repeat Infringers Pay Cox More For Internet, On Average



Sources: PX-19, PX-467-474, PX-479

Costs Saved By Not Addressing Infringement

Cox Maintained A Larger Subscriber Base

Cox Terminations (2013-2014)

Copyright Infringement

Terminations:
32

Residential
32



Business
0

Non-Payment

Terminations:
619,711

Residential
597,796



Business
21,915

Summary of Conclusions

- 1. Copyright infringement causes significant harms to copyright holders**
- 2. Cox is highly profitable and had a strong economic incentive to tolerate infringement**